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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,773	07/17/2003	Yoshihito Osawa	1639.1034	9162

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EXAMINER

COSTALES, SHRUTI S

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 12/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/620,773	OSAWA ET AL.	
	Examiner	Art Unit	
	Chirag V. Shah	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/17/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/17/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuaki (JP2001-164279, publication date 06/19/2001, cited on IDS filed 7/17/03) in view of evidentiary reference "Fomblin Z Derivatives" Product Data Sheet by Solvay Solexis, Inc, 12/13/2002.

Pending a full English-language translation of JP 2001-164279 in setting forth this rejection, examiner has relied upon a machine translation. Please note that the paragraph citation corresponds to the paragraph numbers designated from the machine translation copy.

Kazuaki discloses a method to refine a perfluoropolyether lubricant for use in a magnetic recording medium (para. 11-16). Kazuaki utilizes a supercritical extraction system wherein the supercritical carbon dioxide is contacting the perfluoropolyether lubricant in a predetermined pressure system to purify the lubricant (para. 11-18). The system can be adjusted to control the pressure and temperature as necessary to reach predetermined conditions. The pressure can vary

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in the range of 80-350 kg (f)/cm² or 7.85 to 34.32 MPa (1 MPa = 10.2 kg(f)/cm²) and the temperature range is 35-300 °C, see paragraphs 16 and 18 in Kazuaki.

Kazuaki discloses a perfluoropolyether lubricant having a piperonyl group, a hydroxyl group, a carboxyl group, an ester group or an amino group (para. 21-23). One embodiment of Kazuaki's method to refine a lubricant comprising perfluoropolyether anticipates applicant's disclosure of a lubricant with ionic impurities.

With respect to the claimed limitation that the lubricant has ionic impurities (i.e. sodium ions and potassium ions, chloride ions, HCO₃ ions, HSO₄ ions and sulfate ions) removed during the purification process, note that Kazuaki uses commercial grade lubricant "Fomblin AM2001". While Kazuaki does not explicitly disclose that AM2001 contain ionic impurities, it is the examiner's position that AM2001 and the preferred lubricant described as AM3001 by applicant (see para. 43 in the instant specification) both being commercial lubricant produced by the same company i.e. Solvay Solexis (formerly Ausimont KK) it is reasonable to expect that the same impurities would inherently be present. Applicant's states, "...commercially available lubricants contain impurities which need to be eliminated. For example, a commercially available perfluoropolyether lubricant contains impurities of perfluoropolyether having a terminal group such as -- CF₃, CF₂H and CF₂Cl", paragraph 14 in the instant specification and "...ionic impurities.." see paragraph 16 in the instant specification. Therefore, Kazuaki's method of refinement purifies inherently contain impurities, such as ionic impurities because a commercial grade lubricant, i.e. AM2001 is employed. (paragraphs 19 and 22 in Kazuaki).

2. With respect to the claimed limitation that the lubricant has terminal group of weak polarity consisting of CF_3 , CF_2H , and CF_2Cl in the claims Kazuaki use of the commercial grade lubricant "Fomblin AM2001" anticipates this limitation. Attention is drawn to "Fomblin Z Derivatives" Product Data Sheet by Solvay Solexis, which states that AM2001 and AM3001 are "difunctional aromatic terminated perfluoropolyethers". The structure of the perfluoropolyether lubricant compound as disclosed in Kazuaki (para. 15 and 22) and in the Product Data Sheet is such that the compound would reasonably be expected to have polar characteristics. Especially since the chemical structure of the perfluoropolyether compound is not symmetrical in the sense of canceling dipole movements from various parts of the structure. Although Kazuaki is silent to the removal of specific chemical compounds, it is the examiner's position that the disclosure of Fomblin AM2001, will inherently contain terminal group compound of weak polarity consisting of CF_3 , CF_2H , and CF_2Cl and thus is removed during Kazuaki's supercritical extraction system, see paragraphs 19 and 22.

3. With respect to claims 13-15 Kazuaki anticipates a magnetic recording medium comprising a (a) nonmagnetic substrate, (b) a plurality of levels; nonmagnetic, magnetic and protective layers and (c) a lubricant layer comprising a perfluoropolyether applied to the protective layer (para. 25-29).

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

1. Claims 1-3 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-23 of U.S. Patent No. 6911420 B1 ('420 patent). Although the conflicting claims are not identical, they are not patentably distinct from each other because '420 patent teaches the presently claimed method to refine a perfluoropolyether lubricant for use in a magnetic recording medium. The refinement process of placing the perfluoropolyether lubricant extracting medium of a supercritical carbon dioxide fluid into a pressure vessel at a temperature of 60°C and a pressure of 20 MPa.

Although the patented claims do not explicitly disclose the removal of ionic impurities, such as sodium ions and potassium ions, chloride ions, HSO₄ ions and sulfate ions during the

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“refinement” process, attention is drawn to the specification in ‘420 patent which states that the “ionic impurities that may be contained in the original lubricant include sodium ions, potassium ions, chloride ions, HSO₄ ions and sulfate ions”. (see col. 5, lines 42-43 in US 6911420 B1).

Those portions of the specification which provide support for the patent claims may also be examined and considered when addressing the issue of whether a claim in an application defines an obvious variation of an invention claimed in the patent (emphasis added). *In re Vogel*, 422 F.2d 438, 164 USPQ 619, 622 (CCPA 1970).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag V. Shah whose telephone number is 571-272-2766. The examiner can normally be reached Monday-Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

12/9/05

CVS

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